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Applicant: ALLEMAN)

Examiner: MATAR)

Serial No: 08/798,115)

Group Art Unit: 2601)

Date Filed: 02/12/97)

**DECLARATION OF PERRY WYATT
UNDER 37 CFR § 1.132**Title: INTERACTIVE TELEPHONE)
SYSTEM FOR MAKING LOW)
COST LONG DISTANCE)
TELEPHONE CALLS)

Perry Wyatt, under penalty of perjury, declares:

1. He is the president of Paragon Services International, Inc., assignee of the present application. He makes this declaration of his own personal knowledge, except where based on information and belief, in which case he believes the statements are true.

2. Paragon has engaged in the international call-back business for eight years. The industry has grown substantially because telephone tariffs are frequently set by governments in many countries, but they are deregulated in the United States. Competition has driven down the cost of long distance calls in this country to the point that it is often cheaper to place two long distance calls to different countries from the United States than it is to make one call from one foreign country to another. When all of the world telecommunications industry is deregulated, there will be little need for international call-back according to the present invention, because the artificially high tariff barriers will not exist. That deregulation is estimated to gradually occur, and may be complete before the patent applied for by this application expires. It is therefore

imperative that the patent be granted as soon as possible, so that it can be licensed during the remaining life of the industry.

3. The invention of the present patent application has been an overwhelming commercial success. An article in "Teleconnect" magazine for May, 1996, a copy of which is attached, and which I believe to be true and accurate, estimates that the call-back services market was a billion dollar business worldwide in 1996. I believe the industry is doing a comparable level of business in 1997. The overwhelming majority of the international callback market uses the claimed invention of the patent application. It is difficult to define with precision the amount of commercial success that has been enjoyed by the invention, but it is in the billions of dollars. I truly believe that the success of the invention is measured in the billions of dollars.

I declare under penalty of perjury that the foregoing is true and correct.

Date: 27 August 1997


Perry Wyatt


 INTERNATIONAL
CALLBACK

INTERNATIONAL CALLBACK

CALLBACK TECHNOLOGY LETS LOW-COST AMERICAN DIALTONE STAND IN FOR HIGH-COST PTT LONG DISTANCE SERVICE. THE NAME OF THE GAME IS "BANDWIDTH ARBITRAGE," AND IT'S A NEW PARADIGM FOR TELECOMMUNICATIONS. (HINT: TODAY'S BILLION-DOLLAR CALLBACK BUSINESS IS JUST THE BEGINNING.)

by John Jainschigg

American long-distance dialtone is the cheapest in the world. Depending on the and calling plan, you can call de Janeiro at 1:00 PM on a weekday for as little as \$0.75/minute. But if your pal in Rio makes the same call to you, he bills you something on the order of \$3.65/minute. And because the phone service is supplied by a state monopoly, he had — recently — no place to shop for lower rates.

Today, however, dozens of companies are willing to sell cheaper international long distance service to your Brazilian friend. Enabling the transaction is International Callback — a relatively simple application of switch and IVR technology that delivers some of the cost-advantages of American dialtone to overseas markets.

Traditional callback is very simple: Your friend contracts with a callback provider, and is given the phone number of a Stateside switch. The last four digits of the phone number are

unique — identifying your friend's account. When your friend wants to call you, the following transaction takes place:

1. He places an international call to the American-side switch, lets the phone ring a few times, then hangs up.
2. Since the call is never completed, the Brazilian PTT doesn't charge for it.

Nevertheless, the number dialed is transferred to the US switch, which can be accessed by the target switch via DID or DNIS. The switching system accesses a database to determine the status of your friend's account and find his phone number in Rio. The switch dials your friend. He answers. The switch establishes one "leg" of the call path.

The switch then picks up another line and bridges it to the first, either through the switch (using up two ports), or through a three-way calling service. US dialtone is presented to the caller.

6. Your friend can now dial his final destination number. Even though the call requires two lines, since both legs originate in the US it's still much cheaper than a direct call from Rio to the States. In fact, in many cases, it's even cheaper to dial calls to non-US destinations through a callback provider.

The upshot: a win-win. Your friend in Rio saves a bundle. His callback

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provider makes money on the markup. The only loser is the foreign PTT.

Result: a billion-dollar business, worldwide. And incredible opportunities to make and save money: for businesses (with overseas clients and affiliates), for hotels and calling centers (eager to provide cheaper long dis-

tance service to customers — and make money on the markups), for service providers, and of course, for sales reps and agents, who perform the crucial tasks of selling callback services, installing necessary equipment at client sites, handling billing, and doing hands-on customer service.

SOLUTIONS SCALE TO SUIT

Callback is an implementation of switching and IVR/dialer technology. Many different combinations of equipment can be integrated to provide callback service, at different scales. Some examples:

- Individuals who are traveling or based overseas can realize savings by parking a single-line callback box in a Stateside location. Essentially a microcomputer, coupled to a dialer, this product attaches to a single, three-way-calling line. Because it's intended for use by a single individual (some boxes can be programmed to serve two people at separate locations), the box doesn't have to capture "dialed-number" information to confirm callback — instead, it simply listens for a ring-signal before placing the callback call. (If two people are involved, the box counts rings to figure out who needs service — typically, both callers can't use the box at the same time.) At the callback location, security is preserved by making the box listen for a passcode, before presenting dialtone. Typically, these boxes run under \$400.

- Medium-sized companies with overseas affiliates and/or clients may wish to invest in a proprietary or PC-based turnkey callback solution. Turnkey callback systems range from low port-count devices that use three-way calling and ring-counts for caller identification, to T-1 compatible systems that use DID/DNIS or more advanced X.25-based signaling technology. PC products suitable for service bureaus provide complete call accounting and billing, as well; and may provide other enhanced services, such as voicemail and debit-card processing. These solutions range from a low of about \$2,000 to \$50,000 or more, depending on port-count and features.

- Big-gun service bureaus, multi-nationals, international hotel chains, and the like can obtain complete callback, calling-card, and other enhanced services through



Mixed Rotary/DTMF Input & Output

Call Blocking and Exception Tables

Call Routing by Country + City Code and Carrier Switch Location

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CHOOSING A CALLBACK SWITCHING SYSTEM

Callback solutions come in all shapes and sizes. But there are features that all state-of-the-art systems have in common.

- **Flexible provisioning options.** The best callback systems can be adapted to handle analog trunks or T-1, and use DID, DNIS or packet-network code calling.
- **Multicarrier support.** Good callback systems can route outgoing calls over whichever carrier offers best rates to the service provider, given the parameters of the call in question.
- **Flexible financials.** The best callback systems can be programmed to bill different clients in different ways. They can generate per-client, per-agent/organization, per rep, and other kinds of billing breakdowns. Some can even generate end-user bills that compare rates achieved through callback with projected rates for the same traffic, carried by the user's local PTT.
- **Enhanced features.** Top-end callback systems can be enhanced to provide speed-dial, voicemail, debit card and other features. Some hybrid systems are designed to work both as callback and debit-card switches, and can perform both tasks simultaneously on different port ranges.
- **Scalable.** Callback tends to be an explosive, fast-growth business. Unless you're convinced your operation is going to stay small, your callback system should let you scale easily to larger port-counts.
- **A good client/user interface.** It should provide quick access to speed dial and multiple calls per session. Voice prompts should be multilingual, based on country of client origin. The system should be compatible with dialers — both the inexpensive ones that code-call across the PTT and the more expensive ones that send packet-network messages.
- **Remote access.** Service providers who want to do business with overseas reps will want to invest in a system that can be accessed remotely to create new accounts, change provisioning, and retrieve billing and account information.
- **Distributed architecture.** Some callback systems employ a regional distributed architecture, in which nodes in local calling areas form an international network with the Stateside switching engine. The local node, also a smart switch, can be pressed into service to perform a wide variety of tasks, including providing access to local networks in cases of Stateside switch failure, or routing of calls over local private network if this is cheaper than routing through callback.



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software running on a PC or other computer, attached to a large port-count dumb switch or smart, open-architecture PBX. Some of the switch-side market leaders are Excel (Hyannis, MA — 508-862-3000), Summa Four (Manchester, NH — 603-625-4050) and Harris (Novato, CA — 415-382-5000), plus others in our roundup. Solutions start around \$50,000, and go through the roof.

• If you don't want to mess with hardware, callback service providers are the way to go. Service providers range from small bureaus, doing traditional callback, to large, heterogeneous network providers, fielding international distributor/agent/reseller teams and offering a wide range of complementary technologies: callback, competitive network access, Internet access, and more. See our sidebar for tips on choosing a service provider.

PROBLEMS AND SOLUTIONS

First generation callback systems (manual dial-in, hang up, wait, answer, dial, etc.) are still in use. But

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as markets for callback evolve, these simple solutions become more and more problematic. In response, the callback industry has consistently developed more and more sophisticated technologies and ways of doing business. Prospective callback

customers, resellers, and hardware solution shoppers should check our boxes carefully, for tips on what features make a callback service or product truly "state of the art." Then check out our Roundup for great product and service offerings!@

CHOOSING A CALLBACK SERVICE BUREAU

Whether you're the telecom manager of a firm with overseas affiliates or clients, or an overseas interconnect or potential rep, looking for a callback "product" to sell, there are a few factors that separate today's high-end callback operation from the pack:

- **Remote access/local support.** Callback is an international business that's historically been run on a "get rich quick" basis — a minimum number of US-based "switch minders" providing service for a dispersed network of commissioned foreign sales reps. Given time-zone, language problems, and switch-site understaffing, it's often been difficult for overseas reps to verify client credit, establish new accounts, change switch programming, troubleshoot, or get convenient access to billing and other usage data from a US provider.

The best callback companies have addressed this problem in several ways. First, they've worked hard to train overseas reps to service their products, dialer adjuncts, etc. directly. They compensate local reps with higher commissions, flexible rate schedules ("charge what you want"). US-based credit-card verification, package "branding" (the callback service is sold under the reseller's name), and other services. Second, the market leaders have instituted 24-hour US-based technical and client support, and have designed PC-based remote access systems that let overseas reps establish accounts, change programming, and access usage and billing data directly. The usual means for this is Internet email (which is essentially free), and it's making a huge difference in the efficiency with which callback accounts are managed, through much of the world.

- **Smart systems/Range of features and services.** The best callback services provide a range of end-user features, including the ability to reprogram the callback number from a remote location, IVR support for "talking past" hotel attendants on the callback leg, voicemail, etc. A lot of providers are getting into Internet access, as well; providing low-cost email accounts as an extension of callback service.

- **Dialer support.** These days, any competitive callback provider should offer a range of dialer products appropriate to single users and PBX/hotel installations, local call accounting, true answer supervision, and X.25 packet-based code-calling (to avoid PTT restrictions).

- **Low rates.** Needless to say, rates are important. The top providers all offer service routed over the most cost-effective international carrier, along fiber-only channels. They offer considerable flexibility to local reps and branders to make rate deals with individual clients.

- **Local network provider.** In parts of Europe and the Pacific Rim, deregulation is now putting the cost advantages of two-leg callback in jeopardy. The smartest network providers recognize that callback can only survive as an aspect of full-service telecommunications, and are busily turning their cash-flow into competitive foreign-based long distance switching and network access hardware — becoming, in effect, long distance carriers. Nowadays, if you buy callback from a top-end European provider, chances are that part of your traffic will be handled through the callback infrastructure, and part routed over your provider's intra-European private network, to key cities.

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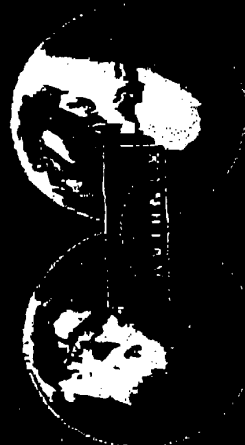
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